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NOTES ON *PARUS RUFESCENS* IN WESTERN WASHINGTON

By J. H. BOWLES

THE pretty little Chestnut-backed Titmice are resident thruout the year almost anywhere that they may be found. Altho nowhere very plentiful, they are most abundant on the west side of the Cascade Range, only a few scattered pairs ever appearing on the eastern slope of these mountains. In fact in four trips thru the eastern part of the state my only record is of a pair that I found with their nest and six eggs a short distance from Lake Chelan, in Chelan County.

In the vicinity of Tacoma these chickadees may perhaps be found in their center of abundance, but even here they are extremely local in their distribution. On the east side of the city lies the Puyallup Valley, a fertile river bottom clothed with willow and cottonwood and running thru fir-clad hills. To the west of the city is the dry, pebbly prairie country, dotted more or less thickly with small and large patches of fir timber, with here and there a fresh-water pond or small brook. In the former locality I have only a few records for these birds, taken only in winter, but in the latter section they may be found in comparative abundance at any season of the year.

In the winter they generally travel in large flocks, seldom associating with the Oregon Chickadee (*Parus atricapillus occidentalis*), but choosing for their companions the Western Golden-crowned Kinglets (*Regulus satrapa olivaceus*) and Red-breasted Nuthatches (*Sitta canadensis*). It is not unusual in winter to see flocks of a hundred or more of the three species above mentioned, busily searching for food thru the dense fir forests.

At the approach of the nesting season the Chestnut-backs retire to the most arid section of the country to be found, the more exposed it is to the sun the better, and it is only in such locations that one may ever expect to find them during the breeding season. The nesting site is chosen about the middle of April, most often in the dead stub of some giant fir or oak. On one occasion only have I found the nest near water, this being in a small willow on the edge of a swamp.

The birds almost invariably dig their own hole, but I once found a nest in the winter burrow of a Harris Woodpecker. One peculiarity about them, which greatly increases the difficulty of finding their nests, is that they almost never start the hole for themselves. Instead they select some place where a fragment of the wood or bark has been split away, or else they will often take the oval hole made by the larva of one of our largest beetles. These holes are not altered at the entrance in any way and, as the dead trees are full of them, it is extremely difficult to locate the one containing the nest.

The habits of these titmice differ in many ways from all others of the genus in my experience, but in no feature is this more marked than in what may rightly be termed the habit of nesting in colonies. In one locality during the spring of 1908 I found no less than seven occupied nests inside a very small area, some not more than fifty yards apart. It was in an extremely dry prairie district that extended for miles in all directions; but I found no other nests during the entire season altho the surrounding country appeared precisely the same. This colony was unusual for the reason that all the nests were very near the ground. The lowest being two feet up in a tiny fir stub, while the highest was only nine feet up in the stump of what was once a majestic oak.

The highest nest I have ever seen in the vicinity of Tacoma was twenty feet from the ground, something very unusual as the average height is not above ten

feet. In the northwestern part of the state, however, it is nothing unusual to find them fifty feet up in the giant fir stubs, remnants of long past forest fires.

The cavity is usually about seven inches in depth, seldom any more, tho occasionally much less. Almost any soft substance to be found in the vicinity is used to make up the nesting material, but there is always a substantial foundation of green moss. Cotton waste from factories, hair of cows, squirrels, rabbits and goats, and small feathers are most often used, one very beautiful nest in my collection being composed almost entirely of feathers from the Kennicott Screech Owl (*Otus asio kennicottii*). No matter how large the bottom of the cavity may be, it is always packed tight, and I have sometimes removed a nest that would easily fill both hands.

The set of eggs is generally completed by the second week of May, and the eggs commence to incubate from the time the first one is laid. This is caused largely, I think, by the bird covering her eggs with the warm nesting material until the full set is laid, which she does every time she leaves the nest. Added to this the nest is always fully exposed to the heat of the sun. Whatever may be the true reason it is always difficult to prepare a large set in thoroly satisfactory condition for the cabinet. It may be of interest to state here that I have occasionally noticed this same habit in the Puget Sound Bush-Tit (*Psaltriparus minimus saturatus*), Tule Wren (*Telmatodytes palustris paludicola*) and Western Golden-crowned Kinglet (*Regulus satrapa olivaceus*).

Seven eggs usually make up the set, six is common, while in twelve seasons I have taken only two sets of eight and two of nine. They may readily be distinguished from those of the Oregon Chickadee (*Parus atricapillus occidentalis*), the only other chickadee in this section, by their greater delicacy in both texture and coloring. The shell is very frail, and the color is a pale milky white, dotted with light red, the markings being mostly confined to the larger end. The eggs vary greatly in both shape and size, some being shaped like a quail's egg, others like a murre's egg. This is frequently the case in the same set. The most common type has a decided tendency to long ovate; but there is such a variation that it would be hard to call anything strictly typical. Three selected eggs taken from ordinary types measure in inches .77x.47, .75x.50, and .76x.46, and an average egg would measure somewhere between these three.

The female is very brave in the defence of her eggs, and frequently cannot be made to leave the nest until it is broken open. In looking into a nesting hole that is occupied by the bird I have never been able to overcome being badly startled by the sudden flutter of wings and fierce cat-like hiss with which she dashes at the face of the intruder when he applies an eye to the entrance of her home. When she is forced to vacate, her complaints always bring up her mate, and then both birds hop about within two or three feet of the bird student, of whom they seem to lose all fear in anxiety over their treasures. Their only note of complaint is a weak, squeaking *peep*, not in the least what one would expect from a true chickadee. On the other hand they have a very pleasing and quite lengthened song, not at all unlike that of the Western Chipping Sparrow (*Spizella passerina arizonæ*). The only season at which I have heard them sing is in the spring, at much the same time as the Black-capped Chickadee (*Parus atricapillus*) has greeted me with his note of *pee-wee* in Massachusetts.

Collecting eggs of this species is most uncertain work, as, should the nest be examined ever so carefully before the eggs are laid, the birds almost invariably detect the fact and promptly desert. Added to this is the habit before mentioned of

covering the eggs until the full set is laid, so the collector is frequently at his wit's end how to proceed.

Apart from the egg collector, about the only destroyer of their homes is no other than the common black and yellow bumble bee. This insect has a veritable mania for living in holes in trees, and a chickadee nest appears to be the acme of its desires. It seems to like the nesting material and prefers the nest before the eggs are laid, but it will often drive the bird away from an incomplete set, pulling up most of the nesting and leaving the eggs underneath.

*Tacoma, Washington.*

## OBSERVATIONS ON SOME BIRDS FOUND IN SOUTHERN MEXICO

By AUSTIN PAUL SMITH

QUITE the most satisfactory region for study of bird life that I have as yet visited, is the little State of Morelos, situated in southern Mexico. Cuernavaca, the capital, is about fifty miles southwest of Mexico City, but owing to the rough nature of the country traversed the railroad counts seventy odd miles.

Cuernavaca lies at an altitude of 5000 feet, in the Upper Sonoran Zone. The lands surrounding the city are almost entirely under cultivation, supporting various crops, but largely maize. Many kinds of tropical fruits are grown; and no adobe but what boasts an accompanying mango, or avocado. The only uncultivated spots are the barrancas, and rocky knolls. Sometimes these latter harbor abundant growth, in which the tree morning glory is, as a rule, the most arborescent member. The few barrancas to the east of the city are dry, except during the rainy months; several westward, however, contain water at all times—therefore, considerable vegetation and many birds.

Pines come to within six miles of the city limits, thus allowing a transition zone of small extent and mostly consisting of the barrancas where the streams are perennial.

As a beginning, I will name the commonest bird within and near the city. It is the House Finch of the Cuernavaca variety (*Carpodacus mexicanus rhodocolpus*). Thousands roost in the rubber trees growing in the city plaza. During the day these same flocks resort to the cornfields and hedgerows outside of town. Often I pondered on how they found an adequate food supply, as the peon and Indian need to harvest to the last stalk to insure existence. Also among the feathered kind, the House Finch has serious competition, at least during the winter, when seed-eating birds are predominant. The food, tho, of this species is not entirely seed and grain: some birds were examined that showed evidence of exclusive diet of mango buds; and one day I came upon a pair flycatching in clumsy manner. A recent shower had ushered into existence quantities of lace-winged insects that haunted the tree tops, and appearing much like fluffs of cotton when floating in and about the branches, proved easy prey even to such novices.

Two other species of finches were abundant as winter residents: Western Lark Sparrow (*Chondestes grammacus strigatus*) and Western Grasshopper Sparrow (*Coturniculus savannarum bimaculatus*). Both were about in numbers until April 15, and stragglers of each species were found ten days after that date. The Grasshopper Sparrow did not sulk in the manner so usual with it in our own country. Certain of his kin there were tho, that believed in persistent retirement, notably *Peucaea botterii*. I never have been favored with the acquaintance of the